

PYRALIDAE

Chrysoteuchia culmella (Linnaeus) – At m.v. light. VC74, Monreith.

Crambus pascuella (Linnaeus) – At m.v. light. VC72, Holywood. VC74, Monreith; Castle Kennedy, adult.

C. perlella (Scopoli) – At m.v. light. *VC72, Holywood. *VC74, Monreith.

Agriphila straminella ([Denis & Schiffermüller]) – Abundant in grassland. VC72, Maxwellton House; Holywood, at mv. light. VC73, Parton; Loch Trool. VC74, Tarn north of Mochrum Loch; Castle Kennedy.

A. tristella ([Denis & Schiffermüller]) – VC72, Holywood, at mv. light. *VC74, Tarn north of Mochrum Loch, adults.

Catoptria falsella ([Denis & Schiffermüller]) – At m.v. light. *VC72, Holywood.

Scoparia ambigua (Treitschke) – At m.v. light. VC72, Holywood. VC74, Monreith.

Dipleurina lacustrata (Panzer) – At m.v. light. VC72, Holywood.

Eudonia delunella (Stainton) – At m.v. light. VC72, Holywood.

E. mercurella (Linnaeus) – At m.v. light. *VC72, Holywood. *VC74, Monreith.

Elophila nymphaeata (Linnaeus) – At m.v. light. VC72, Holywood. VC74, Monreith.

Nymphula stagnata (Donovan) – At m.v. light. *VC72, Holywood.

Evergestis pallidata (Hufnagel) – At m.v. light. VC72, Holywood.

Udea lutealis (Hübner) – At m.v. light. VC72, Holywood.

U. prunalis ([Denis & Schiffermüller]) – At m.v. light. *VC72, Holywood.

Pleuroptya ruralis (Scopoli) – At m.v. light. VC72, Holywood.

PTEROPHORIDAE

Platyptilia pallidactyla (Haworth) – *VC72, Holywood, at m.v. light. *VC73, Clatteringshaws Loch, adults common round *Achillea*. VC74, Monreith, at m.v. light.

***Synanthedon formicaeformis* (Esp.), Red-tipped Clearwing (Lep.: Sesiidae), further evidence of a two year life-cycle**

Most of the current literature concerning the life-cycle of *Synanthedon formicaeformis* (Esp.) the Red-tipped Clearwing indicates that the species has a one year life-cycle. An observation by Dr Barry Henwood of a larva producing frass from June (when the gall was collected) until August and then overwintering to a prepupal larva in June of the following year suggests that this may not be the case. Fibiger and Kristensen discuss the species and refer to “presumably a single hibernation”. The life-cycle charts in MBGBI volume 7 part 2 describe a one year life-cycle and the description in volume 2 includes the comment “life-cycle said to be one year”.

In an attempt to breed this species osier stems with beetle damage were obtained from the environs of a gravel pit near to Chichester, Sussex, in March 1993. Over the next two months a few imagos emerged and in July the mines were dissected to demonstrate the anatomy of the larval mine and the position of the cocoon. Whilst splitting the stems a small sesiid larva (8mm in length) was encountered in the central portion of one of the thicker stems. This was placed in a hole drilled in a small branch (1.5mm in diameter) of a willow in my garden. Some frass was extruded during the summer months but there was no sign of the larva the following spring until in May a small protuberant mass of frass (projecting only 2mm) held together with silk appeared from the place where the stem had been drilled. This was the end of the cocoon and the moth emerged in due course. It was fascinating how little outward presence of the larva there was; even in the spring before emergence there was nothing in the way of gall formation although the area drilled had developed some callus in response to the injury.

This represents further evidence that *S. formicaeformis* has a two year life-cycle and not the one year as suggested by most of the current literature. As the woody material was gathered very early in the year (mid-March) well before any potential flight period of the imagos, it is not possible to explain this observation in terms of there being a fertile ovum already laid on the stem when collected which then hatched, neither were imagos left in the cage to mate and oviposit.

After making an observation contrary to received opinion it is tempting to suggest that current literature is incorrect. This may indeed be so but alternatively the species may have a variable life-cycle with some larvae taking one and some two years before reaching maturity. This is a feature of some lepidoptera particularly encountered in the pupal stage with pupae lying over sometimes several winters before emerging. I have observed that in the case of *Bembecia chrysidiformis* (Esp.) most of the larvae will mature (from ovum to adult) in just one year given an adequate food supply but one larva took two years to complete the life-cycle. This would seem a sensible strategy in survival terms in that it provides a buffer against adverse circumstances (climate, predation or parasitism for instance) which might operate more during some years than in others. To take an extreme example; if a species was wiped out in a locality in a season two larvae or pupae overwintering an extra year could in effect reintroduce the species.

References: Fibiger, M. and Kristensen, N.P. (1974). *The Sesiidae (Lepidoptera) of Fennoscandia and Denmark*, Scandinavian Science Press Ltd; Henwood, Dr P.B. (1993). *Entomologist's Rec. J. Var.* **105**: 139-140; Heath, J. and Maitland Emmett, J. (1985). *The Moths and Butterflies of Great Britain and Ireland*, **2**. Harley Books, Colchester; Heath, J. and Maitland Emmett, A. (1991). *Ibid.* **7**, part 2, Harley Books, Colchester.

— DR JULIAN H. CLARKE, Oaklea, Felcourt Road, Lingfield, Surrey RH7 6NF.